A CASE OF HYPERMETROPIC REFRACTION, PASSING WHILE UNDER OBSERVATION INTO MYOPIA — SYMPTOMS SIMULATING GENERAL NERVOUS DISEASE.

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IN the issue of the American Journal of the Medical Sciences for October, 1880, I published with careful detail the history of four cases of eye disease, which while under observation passed from hypermetropic to myopic refraction; both conditions having been carefully determined, after the prolonged and vigorous use of a mydriatic.

I now desire to place on record in the annals of this society an additional case. The report is prompted also by the somewhat remarkable history, which clothes it with additional interest, as showing how the symptoms of a low grade of choroiditis attended with a gradual distension of the eyeballs, in a nervous girl, with a peculiar family history, may simulate serious mental and nervous disease.

L. B., aged ten years, a pale, nervous child with transparent skin, black hair and eyes, restless nervous manner, was brought to me in March, 1877, by the advice of her physician, Dr. C. R. Prall, of Philadelphia, for an opinion as to some possible relation between her nervous symptoms and eye strain.

She suffered constantly from headache, which, commencing in the brow and temples, radiated to the occiput and nape of the neck. She had been taken from school in consequence of an attack of chorea, which threatened to return when school was once more resumed, all the symptoms being aggravated by the use of the eyes at a near point. Examination revealed well marked choroido-retinal irritation, with undue sensitiveness to light, and a crescent of choroiditis embracing

the temporal half of both optic nerves. V = $\frac{20}{xx}$? in each eye. After thorough use of sulphate of atropia continued several days, she selected for each eye + $\frac{1}{60}^{s}$ ⌒ + $\frac{1}{60}^{c}$ ax. 90° with which V. = $\frac{20}{xx}$, the accommodation being paralyzed. This glass was ordered to be worn except at her out of door sports. Under its use the choreaic symptoms and headache promptly disappeared.

One year later she was again brought to the office with a return of all the symptoms. The mother stated they had supposed she was well and that the glasses were no longer necessary, so they had been gradually more and more neglected and finally laid aside entirely. The mother now came in a very despondent mood, and laid before me a distressing family history. During gestation with this child she had been in a condition bordering on puerperal mania: that a later child had been born with cleft palate; that the child's maternal grandfather and an uncle had died with "softening of the brain"; that another uncle had died at seventy-three years of age after months of imbecility; and that a cousin aged twenty-two was then in an asylum for the insane.

The child was now said to be dull and spiritless, got on badly at school, slept badly and complained constantly of being tired. There were no choreaic symptoms, but she suffered once more from the fronto-occipital pains, aggravated by the use of her eyes.

A new home had been established in Boston and the family were on the eve of a removal. She was advised therefore to resume the use of her glasses, and if necessary consult some ophthalmic surgeon in Boston.

I saw no more of the patient until June, 1883,—now a young lady of rare beauty and to all appearance in perfect health. She came, however, because of her headache and inability to use her eyes. She related that during the intervening years she had been unable to pursue her studies except by the aid of tutors, her lessons being read to her, or taught by other devices calculated to spare the use of her eyes. She had been notwithstanding a constant sufferer from headache. She had consulted Dr. Williams of Boston, and Dr. Agnew of

New York, both of whom elicited the above family history of the patient, and after careful analysis she thought were disposed to regard her eye symptoms as a part of her general condition, and carefully regulated her general course of living, the former calling in also the aid of the optician for a pair of resting glasses.

Feeling that all, therefore, had been done in that direction, I once more sought carefully for some local condition which might account for the prolonged inability to use the eyes. This course was strongly suggested in the first place by her greatly improved health, and furthermore by the fact that the headache, although quite constant, was nevertheless exaggerated by the use of the eyes or by exposure to strong light. It was now found that V. had sunk to $\frac{20}{xl}$ and the eye ground could be seen distinctly only with a concave glass.

There was much pigment absorption throughout the eye ground, and a narrow, well-marked semi-atrophic crescent at the site of the former choroiditis. In the periphery of the eye ground, to the limit of the ophthalmoscopic picture, there were numerous dull pigment clouds. Externally the anterior perforating vessels were full, and presented a marked feature over the bluish sclera. A solution of sulphate of hyoscyamin gr. ii.—f℥i. was prescribed, to be used thrice daily in each eye. This was continued four days. Under it the headache disappeared, and the vision improved. In O.D. to $\frac{20}{xxv}$, calling many letters correctly in xx. With —.25^{c} ax. horizontal V. = $\frac{20}{xx}$ readily and most of the letters in xvi. were called correctly at 20′. In O.S., however, —.25^{s} ⌒ —.50^{c} ax. hor. was necessary, and with it V = $\frac{20}{xvi}$, miscalling the confusion letters. These glasses were ordered to be worn constantly for distance, and a weak convex combination giving a common far point, with weak prisms bases in, for continuous near work at her books and piano.

The result was very gratifying, since six months later, she had had no return of her symptoms. It seems, even in view of the facts, incredible that so weak a correcting glass should have been even an important factor in relieving her long standing trouble. She nevertheless assured me, when I sug-

gested the omission of the distance glasses, that she was afraid to go without them, since even a brief interval of omission was sufficient to bring on a sense of discomfort.

The conclusion seems justifiable that at least the head symptoms from which this young woman suffered, and the inability to use the eyes, were the consequence of a low grade of choroiditis, resulting in a disturbance of the nutrition of the sclerotica, and gradual distension of this ordinarily unyielding membrane. It is an important inquiry whether, if the original correcting glasses had been faithfully worn, these years of suffering and interruption of the educational process might not have been prevented.

DISCUSSION.

DR. KNAPP.—A great many cases of astigmatism in young ladies of a nervous temperament have been reported. A great many have come to me supplied with all kinds of glasses, prescribed by regular oculists, without being relieved. In the most of them I found sight, refraction and accommodation normal. I have simply advised these patients general hygiene, and they have got well. I think that in these nervous girls, where sight and refraction are normal, it is commonly not necessary to give glasses, or if they are used, it should be temporarily only. Many patients are not able to recognize a refractive error of $\frac{1}{48}$. It requires the ophthalmoscope to detect it. With the ophthalmoscope, those who are practised in determining the refractive condition in the erect image, determine an error of $\frac{1}{72}$ quite readily.

I do not wish to be understood as criticising Dr. Risley's case. I only wish to express my opinion on the extensive use of very weak convex glasses, both spherical and cylindrical. To prescribe glasses to almost every patient, that has not a coarse, organic lesion, seems so much to be the tendency of the day, that very soon oculists will be called refractionists, as twenty-five years ago they were called iridectomists.

DR. SEELY.—I did not understand Dr. Knapp's allusion to small amounts of astigmatism. I think he said that a small amount of astigmatism, if under $\frac{1}{72}$, might be ignored. It must have been a remarkable experience which has not found great inconvenience when the astigmatism amounted to .5 D.

DR. KNAPP.—I know that some people derive great comfort from $\frac{1}{72}$ cylindrical; spherical glasses of and below that

strength, for young people, are, in my opinion, nothing but placebos, the same as $\frac{1}{144}$ cyl. which I have seen prescribed.

DR. SEELY.—I think so too, but I think that it is likely to increase if not corrected.

DR. HAY.—I think that there must be a great difference of opinion on that subject. I remember hearing at the meeting of the International Ophthalmological Society in New York, one gentleman, I think that it was Dr. Loring, say that as a rule myopia should be fully corrected. I would only say that I have not persuaded myself of that. It is not my custom to advise glasses in small degrees of myopia. I give glasses which do not fully correct the error, and even then I prefer to give weaker glasses for reading.

As regards the diagnosis of refractive errors, I would trust the patient's vision for astigmatism of .5 D. rather than my own eye. On account of the little variations in the light, or in the position of the patient's eye or of my own eye, I could never be sure of small differences.

DR. THEOBALD.—It seems that the best indication for the correction of slight degrees of astigmatism is the presence of asthenopic symptoms. And this rule holds good also in the lower grades of myopia; for when asthenopia is present in this condition, it seems to be due to a disproportion between accommodation and convergence. In these cases, the correction of the myopia restores the normal relation between convergence and accommodation, and the asthenopic symptoms disappear. On the other hand, when there is no asthenopia in low degrees of myopia, and accommodation is so related to convergence that no discomfort is experienced, correction may not be necessary.